Lucas Nascom
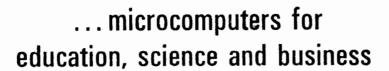
...microcomputers for education, science and business

RECOMMENDED RETAIL PRICES

Effective Date — 1st May 1983

(Prices exclude V.A.T. and P & P)

(Prices subject to change without notice)

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(******** THE RAM BOARD IS A 256K BOARD POPULATED AS 64K - TO UPGRADE TO 256K ADD #100   ********)
(Colour Monitors are available in LX housing - please add #250 to below prices)

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LUCAS LX7 64K CP/M 5Mb Winchester (760K backup)    LX/007    3895.00
LUCAS LX6 64K CP/M 3drive 2.3Mb(double sided)      LX/006    2595.00
LUCAS LX5 64K CP/M 2drive 1.5Mb(double sided)      LX/005    2395.00
LUCAS LX4 64K CP/M 1drive .75Mb(double sided)      LX/004    1995.00
LUCAS LX3 64K CP/M 3drive 1.2Mb(single sided)      LX/003    2295.00
LUCAS LX2 64K CP/M 2drive .75Mb(single sided)      LX/002    1995.00
LUCAS LX1 64K CP/M 1drive .37Mb(single sided)      LX/001    1795.00
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(discs for NASCOM 3 are HALF HEIGHT)
```
NASCOM 3 64K CP/M AVC with 1.5Mb disc storage      N3/106    1825.00
NASCOM 3 64K CP/M  AVC with .75Mb disc storage     N3/105    1549.00
NASCOM 3 64K CP/M AVC FDC                           N3/104    1099.00
NASCOM 3 48K NASDOS with 1.5Mb disc storage        N3/103    1525.00
NASCOM 3 48K NASDOS with .75Mb disc storage        N3/102    1175.00
NASCOM 3 48K NASDOS FDC                             N3/101     739.00
NASCOM 3 48K                                        N3/100     549.00
NASCOM 2 built and tested , no user RAM            N2/110     285.00
```
(For Switchable Systems ADD #40 + Alternative Operating System)
KITS

```
NASCOM 2 , no user RAM                             N2/109     225.00
NASCOM 1 with NAS-SYS 1                            N1/108     125.00
```
(While existing stocks remain NASCOM 1 Kits are available at #49.95
BOARDS

```
ADVANCED VIDEO CONTROLLER                          N3/B1      149.95
256K memory board (populated as 64K)              N3/B2      150.00
256K memory board (fully populated)               N3/B3      285.00
RAMB 48K board (populated as 16K) BUILT            N3/B4      100.00
(EACH ADDITIONAL 16K FOR RAMB Board)              N3/B5       15.00
FLOPPY DISC CONTROLLER                            N3/B6      130.00
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TEC 1550CD 120 cps 132 cols (serial/parallel)     N3/P4      649.00
TEC F-10 40 cps daisy wheel                        N3/P5     1285.00
LUCAS LX80 80 Col /80 Cps Matrix   *** NEW ***N3/P6  319.00
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NETWORKING

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NASNET - MASTER CONTROLLER                         N3/NETM     99.95
NASNET - WORKSTATION                               N3/NETS     59.95
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DISC SYSTEMS (Excluding FDC) HALF HEIGHT ONLY

```
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DUAL DISC DRIVE (DS/DD)                            N3/D4      789.00
SINGLE DRIVE ONLY                                 N3/D5      250.00
WINCHESTER + SASI CONTROLLER                       N3/D6     1425.00
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APPLICATION SOFTWARE              CODE    RETAIL
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Packages - NAS-SYS/NASDOS                    .

NASCALC                           N3/AP1    70.00
MANOR                             N3/AP2    50.00
CORPLAN                           N3/AP3    40.00
SPEX                              N3/AP4    60.00
NASPEN                            N3/AP5    30.00


Packages - CP/M
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SUPERCALC 2      ***  BRAND NEW  ***  N3/AP100  200.00
CALCSTAR                          N3/AP101  150.00
DATASTAR                          N3/AP102  175.00
WORDSTAR                          N3/AP103  295.00
MAILMERGE                         N3/AP104  145.00
SUPERSORT                         N3/AP105   60.00
SPELLSTAR                         N3/AP106  120.00
FMS80                             N3/AP107  650.00
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FINAS (6 modules)                 N3/AP110 1249.00
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PURCHASE ORDER PROCESSING         N3/AP112  249.00
SALES LEDGER                      N3/AP113  249.00
PURCHASE LEDGER                   N3/AP114  249.00
NOMINAL LEDGER                    N3/AP115  249.00
PAYROLL                           N3/AP116  249.00
STOCK CONTROL                     N3/AP117  249.00
NEWSPAC - Newsagents Package      N3/AP118  500.00

FIRMWARE AND SYSTEM SOFTWARE
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Operating Systems
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NAS-SYS 1                         OS/SYS1   12.00
NAS-SYS 3                         OS/SYS3   20.00
NASDOS                            OS/DOS    60.00
CP/M                              OS/CPM   100.00

Programming Aids
----------------
ZEAP 2.1 (Tape)                             25.00
ZEAP 2.1 (Eprom)                            37.00
NASDIS (Tape)                               20.00
NASDIS (Eprom)                              30.00
NAS-DEBUG (Tape)                            28.00
NAS-DEBUG (Eprom)                           15.00
NASSEMBLER                                  45.00
POLYSYS 4 (Tape)                            30.00
POLYSYS 4 (Eprom)                           35.00
NAS-DIS/NAS-DEBUG (Tape)                    28.00
Languages
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8K Microsoft BASIC (ROM)                    20.00
8K Microsoft BASIC (TAPE)                   15.00
Extended BASIC (TAPE)                       40.00
Extended BASIC (NASDOS)                     60.00
Extended BASIC (CP/M)                       60.00
MBASIC                                     220.00
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Languages (Cont'd)

PASCAL (TAPE)   45.00
PASCAL (EPROM)   75.00

Miscellaneous

PIO OPTION   MIS/1   12.00
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NASCOM 1 KEYBOARD   MIS/5   60.90
NASCOM 2 KEYBOARD   MIS/6   69.90
LX KEYBOARD   MIS/7   130.00
CARD FRAME   MIS/8   49.50
NASCOM 3 CASE ONLY   MIS/9   64.95
DISKETTES Pack Of 10 SS/DD   MIS/10   30.00
DISKETTES Pack Of 10 DS/DD   MIS/11   32.50
NASCOM 1 Buffer Board Kit   MIS/12   35.00
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Vero DIP prototyping board   MIS/16   15.00
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NASCOM 1 43 edge connector   MIS/19   6.94
Parallel Printer Cable (EXTERNAL)   MIS/20   20.00
Serial Printer Cable (EXTERNAL)   MIS/21   15.00
LX80 Printer Ribbon   MIS/22   6.50

MANUALS
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USER MANUAL 1   MAN/1   20.00
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MANUAL 3   MAN/3   6.00
MANUAL 4   MAN/4   12.50
MANUAL 5   MAN/5   22.00
MANUAL 6   MAN/6   8.75
MANUAL 7   MAN/7   7.50
NASCOM 1 Manual   MAN/8   10.00
NASCOM 2 Manual   MAN/9   10.00
SPEX Manual   MAN/10   3.00
AVC CP/M Terminal Manual   MAN/11   1.00
NAS-CALC   MAN/12   1.50
MANOR   MAN/13   1.50
Extended BASIC   MAN/14   4.00
CP/M 2.2   MAN/15   1.75
NASDOS   MAN/16   2.00
RAMB   MAN/17   1.50
NAS-SYS 1   MAN/18   3.00
NAS-SYS 3   MAN/19   3.00
NASDOS Utilities   MAN/20   1.00
NASDIS   MAN/21   3.25
NASSEMBLER   MAN/22   2.00
I/O BOARD   MAN/23   1.00
NASPEN   MAN/24   1.00
3 AMP PSU   MAN/25   1.50
NASBUS   MAN/26   1.00
Floppy Disc Controller   MAN/27   1.00
ZEAP   MAN/28   4.00

16, The Square. Kenilworth. CV8 1EB. Tel: Kenilworth (0926) 512127.

MICRO POWER SOFTWARE

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48027	Xtal Basic	£40.25
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Magazines

CODE NO.	DESCRIPTION	PRICE (Inc. VAT)
48071	INMC News	£ 0.95
48070	Micropower Magazine	£ 0.95
48067	Nascom Newsletter	£ 1.25

Business & Leisure
Micro Computers

General

&

Educational

Software

for

na/com

Issue 3. June 1983

CATALOGUE

Business & Leisure Microcomputers

Software Division

Introduction. It is the aim of B & L Microcomputers Software Division to make available to Parents and Educational Authorities high quality software for the Nascom microcomputer designed to be of value in teaching both at School and in the home. Programs which aid administration and record keeping are included in this catalogue as well as some selected games which have an educational value. The programs offered have to meet a carefully prepared specification designed to ensure their suitability for their purpose, their ease of use and the quality of the supporting instructions and tutorial notes.

Technical Details Programs are normally supplied on tape recorded in Nascom 2 format at 1200 baud. Most programs require, as a minimum, Microsoft Basic v 4.7 and NAS-SYS1 or 3. Details of any special requirements for the program and the minimum amount of RAM required are given in the program description in the catalogue.

Copyright All programs offered in this catalogue are the copyright of B & L Microcomputers or of the Authors. It is a condition of sale that the program is used only on the specific machine for which it was purchased and that the purchaser does not copy the program (except for precautionary back-up purpose) nor disposes of the program to others in any way.

Additional Programs. In seeking to expand the range of suitable software available. B & L Microcomputers would be interested in any programs or ideas which readers of this Catalogue might put forward. For programs which can meet the specification and are suitable for inclusion in the catalogue, Authors will receive generous payments on a Royalty basis. To encourage ideas for programs from those who may not feel able to devote the time and effort to writing a program. B & L Microcomputers are offering prizes for the best contributions.

Potential Authors or contributors may obtain details by writing to

B & L Microcomputers,
Software Division,
16.The Square,
KENILWORTH
Warwickshire,
CV8 1EB

EDUCATIONAL PROGRAMS

A.1 "TOP PHYSICIST" Simulates the multiple choice questions which are part of the GCE, CSE and 16 Plus exams, teaching the subject and important examination techniques. A first class aid to good exam results. Requires 32K RAM. Copyright D.Mayes & B & L Microcomputers.

A.2 "TOP MATHEMATICIAN" This game is designed to improve mathematical skills over a wide range of ages in school or at home. An excellent program which makes mathematics fun to learn. Requires 16k. Copyright D.Mayes & B&L Microcomputers.

A.3 "TOP HUMAN BIOLOGIST" See "Top Physicist" above.

A.4 "TOP CHEMIST" See "Top Physicist" above.

A.5 "TOP TABLER" A splendid game for teaching or improving the times tables in school or at home. An amusing program which is recommended for the way in which it makes learning tables fun.Requires 32K. CopyrightD.Mayes&B&LMicrocomputers.

A.6 "TOP WORD PUZZLE MAKER" Use this program to produce up to hundreds of DIFFERENT word puzzles from the SAME set of words. This program is a MUST for anyone interested in entertaining, selling or educating. Clues can be included in the printed puzzle if required. A PRINTER is essential as the puzzles are NOT played on a video screen but are presented on paper printed by the computer. The players do not need to use the computer. Requires 32K as well as the printer (Serial or Parallel). Copyright D.Mayes and B & L Microcomputers. (See Page 7 for examples of word puzzles)

A.7 "VOCABULARY" A program to help acquisition of an improved vocabulary for students of French or German. Includes facilities for self-test or computer scored testing. The vocabulary of over 100 word pairs can be altered by the teacher. Requires 8K. Copyright E.Anderson & Program Power.

A.8 "TEST CARDS" Simple reading test using large characters on the screen. Four sets of words similar to those in currently popular teaching books. Facilities for additional words. Needs less than 8K. Copyright D.R.Green & Program Power.

A.9 "MIND BENDER" A game designed to encourage logical thought and systematic approach to problem solving. Loaded using the "R" command. Executed at 1000H. Requires less than 4K. Copyright S.Beresford & Program Power.

A.10 "GRAPH PLOT" A very useful program for rapid display of the graph of an equation of the form y=function of x. The user specifies the origin and range of the x and y axes. Requires 8K. Copyright S.R.Wilson & Program Power.

INDEX

EDUCATIONAL PROGRAMS(Continued)

A.11 "CONSTELLATION" This program turns your screen into a "telescope" to view the stars from any point in the Northern Hemisphere, at any time and date. Stars can be displayed by magnitude, constellation or individually from a numbered list supplied. The telescope can be rotated, raised or lowered and zoomed in or out. There is a facility for printing out a star map. Requires 16K. Copyright Program Power.

A.12 "BUTTERFLY" A competitive game based upon Addition, Subtraction, Multiplication and/or Division of variable degrees of difficulty for up to four pupils. The prize is a picture of a beautiful butterfly. Requires less than 8K. Supplied on tape at 300 & 1200 Baud.

A.13 PHYSICS LABORATORY. This is a suite of eight programs designed primarily for use with "A" Level classes though some of them could be used profitably in the final year of "O" Level. The whole program occupies about 12.5K of memory and requires NASCOM graphics. The programs are intended as teaching aids to be used as part of lessons on the relevant topics. Comprehensive Tutorial Notes are supplied. Copyright B.M.Hawkes and B & L Microcomputers.

1. Beats. A program to show the way in which two waveforms of similar frequency combine to produce a single wave of varying amplitude. There are three options available; the first displays two component waves of the same amplitude and frequency ratio of 4.5, the second displays their sum, and the third their difference.

2. Simple Harmonic Motion. Many text-books give a preliminary explanation of s.h.m. by describing it as the motion of a point along a line which is the projection of a point moving with uniform angular velocity in a circle. This is not easy to demonstrate in practice and this program provides a clear visual demonstration.

3. Fourier. In teaching sound, one always points out that the quality of a musical note can be considered as depending on either the waveform of a note or the harmonic content, and that these are simply two different ways of looking at the same thing. However, it is not easy to demonstrate the equivalence unless one has a large number of audio frequency oscillators of exceptional frequency stability. This program shows how a square wave and a triangular wave, the two types available on most a.f.os can be built up from a sine wave and its harmonics.

4. Waves. This program shows the movement of particles in three types of wave: a stationary transverse wave, a travelling transverse wave and a stationary longitudinal wave. In the first two, about two cycles are shown. In the third, one and a half cycles are shown in order to obtain sufficient definition. The travelling wave moves from right to left and incorporates a "bottomed" section to make the travelling more obvious.

EDUCATIONAL PROGRAMS (Continued)

A.13PHYSICS LABORATORY. (Continued)

5. Damping. This program plots the graph of the motion of a particle under harmonic motion with degrees of damping from 0 (i.e. s.h.m) up to 2.5 times the critical value. An arbitary factor "K" is typed in and the graph is then plotted.

6. Lissajous Figures. Although an oscilloscope is a valuable tool for comparing frequencies by the use of Lissajou's figures, it is difficult for inexperienced students to identify the patterns since they will rarely remain stationary for long enough to identify. With a large-screen oscilloscope, it is possible to point out the pattern at the key moment but such instruments are too expensive for most of us. This program shows the pattern given by integral or half integral frequency ratios so that students will know what to look for.

7. Geiger Experiment. Geiger and Marsden's experiment, although a classic, is not reproducible with normal school apparatus. This program produces a simulation of the experiment pictorially. A nucleus is located at the top left hand corner of the screen and alpha particles bombard it, approaching horizontally from the right at random levels. It is intended that the program should be used as an illustration after describing the original experiment.

8. Millikan's Experiment Like Geiger and Marsden's experiment, Millikan's experiment is an important and classic example. Although it is possible to obtain apparatus for school use, it is expensive and hard to use. Only one student can perform the experiment at a time. This program provides a simulation either for class use or for use by small groups or individuals. The only additional apparatus needed being stopwatches. After displaying the basic data on the screen, the program shows the graticule which would be seen through the microscope and asks for the voltage on the plates to be specified. When this is done and the ENTER key pressed, an oil drop appears on the screen and its fall past the graticule can be timed.

UTILITY & LANGUAGE PROGRAMS

B.1 "PASCAL" Nascom Pascal is a complete 12K Pascal Language system for use with Nascom 1 or 2 with NAS-SYS 1 or 3 monitor. It consists of a runtime package (4.5K), a control program (0.5k), an on-screen editor (1.5K) and a compiler (5.5K). The compiler directly compiles Z80 machine code at 2000 lines per minute resulting in a program which executes at speeds 3 to 20 times faster than equivalent Basic programs. Available on tape. (residing at 1000H to 3FFFH). or EPROMS (D000H to FFFFH).

B.2 "PASCLDOS" A disc extension to Nascom or BLS Pascal which allows loading and saving to disc as well as tape. It is also possible to compile to disc when memory is short. Sequential files of Integers Real and Strings as well as Random files of Strings are supported. Requires 48K.

B.3 "ENHANCED BASIC" An exceptionally powerful and flexible implementation of the BASIC programming language. There are many novel features including the facility for users to alter and extend the language to meet their own requirements. There is full screen editing; variable names of up to 5 characters; integer arrays for compact data storage; IF..THEN..:ELSE is permitted in a single statement; support of data and program files allowing output to tape, printer and (for the disc version) to disc; statements may be up to 128 characters in length which can be increased to 254 characters by declaring a larger input buffer. Requires at least 16K. Tape version available now.

B.4 "NAS-SEMBLER" For the NASCOM user with NASDOS floppy disc system. Provides one of the most powerful assembler packages available on any microcomputer. NAS-SEMBLER is designed for the Z80. There are optional cross-assemblers for 6800 and 6502 microprocessors. Occupies approx. 6K of memory.

B.5 "WIRRAL PILOT" A language written with Computer Assisted Learning (CAL) in mind. This version for the Nascom was written by Alec Wood of the UK Pilot Users Group. Pilot is particularly adept at fast matching of long strings giving a considerable advantage over Basic for interactive learning projects. Mathematical calculations are the same as in Integer Basic. Supplied on Tape with programming manual. Occupies 0E7DH to 1FFDH.

B.6 "NASPEN" A word processing program for the Nascom giving the ability to store and edit text entered either from the keyboard or from tape. Comprehensive set of commands available for editing including block moves. formatting. right justification, tabulation and paging. Facilities for printing or saving to tape. Requires 16K. Supplied in 2 EPROMS and resides at B300H to BFFFH. There are versions for NAS-SYS monitors or for the earlier Nascom monitors. Will also run in RAM for Disc systems.

UTILITY & LANGUAGE PROGRAMS

B.7 "NASPEN EXTENSIONS" Gives a number of most useful extensions to Naspen including saving and loading to disc (for the disc version) and additional editing commands. There is a facility for the addition of extra extensions by the user. The operation of many commands has been speeded up. Printer routines are included. Suitable for 32K or 48K systems.

B.8 "ZENTHOR NASPRINT" Print extensions to Naspen. Providing facilities for printing page numbers, printing headings to each page, performing a Mail Merge and for setting the left margin.

B.9 "SUPERPEN" Consists of NASPEN and all the extensions combined in one package. There are additional features such as word count and adjustment of the left margin within the text. For disc systems only.

B.10 "MANOR" A general purpose database management program for the NASCOM with NAS-DOS disc system. A very versatile system with almost limitless applications. Typical uses include customer records, exhibition enquiries, parts list, drawing files, stock control, machine maintenance records and scheduling, personnel or pupil records and cataloguing (eg records, books, files etc). Supplied with initialising program, HINTON, for configuring the the system to suit the application. MANOR typically can handle between 500 and 1500 records of up to 30 different items of data. The maximum capacity depends upon the number of items stored in each record and the number of characters in each item. Records can be created and can be added to the file, existing records can be edited deleted or listed to screen or printer. There are facilities for sorting and for searching files as required. The format of the printout can be varied. Supplied on Disc, the program requires 48K and can be configured to suit NAS-SYS 1 or 3 and a variety of printers.

B.11 "NAS-CALC" A NASCOM implementation of a "computerised worksheet" to store and manipulate data in up to 100 rows and 100 columns. The width of each column can be between 3 and 43 characters. Column width, number of rows and columns can be specified when the program is initialised and can be changed during operation of the program. Almost any mathematical relationship can be specified between rows and columns. There is provison for totalisation, series arithmetic and low level matrix algebra. The data created may be stored and subsequently retrieved using tape or disc. All or selected parts of the display may be printed. Applications for this general purpose package are almost limitless and include, for example, price lists, works schedules, sales planning and return calculations, budget planning, personal acount and tax returns. Suitable for the Nascom 2 or 3 (or Nascom 1 with Nascom 2 Keyboard facilities) with tape or NASDOS disc system.

B.12 "NAS-NET 1 A low cost system which allows the sharing of resources within a network of linked NASCOM microcomputers. A central "master" computer can be linked with up to 32 satellite computers. The system allows all the machines to share the disc and printer facilities of the master. The master must be a Nascom 1, 2 or 3 equipped with the NAS-DOS disc operating system; the satellites can be any Nascom 1, 2 or 3 fitted with NAS-SYS 1 or 3. The links, which can be up to at least 50 ft, consist of 3 core cables using the RS 232 connections on master and satellite through a multiplexer unit.

UTILITY & LANGUAGE PROGRAMS

B.13 "NASCII" Enables large characters to be formed on the screen. Letters, including lower case with descenders, numerals and punctuation can be displayed. User defined characters may also be used. There is provision for left or right justification or centering of text. Two programs are supplied, one is a demonstration package and the other is a routine to include in your own programs. Requires 8K and NASGRA. Copyright D.R.Green & Program Power.

B.14 "CLUB MEMBERSHIP" A useful program for a simple list of names and addresses (up to 200 in 32K). Could be used for other purposes, eg lists of pupils. Names, addresses, dates and remarks can be included and subscriptions where appropriate. Simple but comprehensive facilities for entry and editing of items. Lists are stored and retrieved from tape. Requires 32K and a serial printer at 300 or 1200 baud. Copyright Program Power.

B.15 "HULLFORTH" This is a new compiler/interpreter for the Nascom based upon the language "Forth". It is an important new programming language which provides a simple to use, interactive programming environment allowing complex software to be produced "at the keyboard" but, because the final program is truly compiled, it is without the speed penalty of BASIC.

The unique combination of stack orientated, reverse Polish integer arithmetic (up to 32 bits as standard) with high level structuring (DO..LOOP; IF..ELSE..ENDIF; BEGIN..UNTIL) enables well structured and readable programs to be written resulting in compiled code which is fast and efficient.

The vocabulary is indefinitely extendible whch means that the programmer is not limited to the standard set of reserved words. New words, defined by the programmer, become part of the vocabulary.

"Hullforth" requires 8K plus dictionary space which grows upwards as the programming proceeds. Available on tape for Nascom 1 with NASBUG or NAS-SYS 1 or 3 and for Nascom 2 with NAS-SYS 1 or 3. Supplied with a comprehensive Reference Manual and self teaching guide.

B.16 "ZEAP" This is an Editor-Assembler package for the Nascom. The Editor part of the package facilitates entry, examination, correction and permanent storage of source programs written in the Z80 mnemonic language The Assembler translates these programs into executable machine code. The user has control over memory allocation and there are comprehensive error checking routines. The resulting object program can be stored on tape or directly in memory. ZEAP is supplied in two 2708 EPROMS and resides at D000H to DFFFH. There is a tape version which resides at 1000H to 1FFFH. A further 4K of memory is required for the source and object programs i.e. a miniumum of 8K. ZEAP is for use with Nascom 1 or 2 with NAS-SYS. There is a version for the NASBUG monitors.

B.17 "ZEAP DISC" This extension to ZEAP allows NASDOS users to load, save and append files from disc. There is also a Directory command which displays all the ZEAP files available on the current disc drive. Parallel and Serial Printer routines are included. ZEAP DISC is supplied on disc and, when loaded and executed, it automatically modifies, and then transfers control to ZEAP.

WORD PUZZLE MAKER

Sample Puzzles

Version 1 Deliberately made easy by using lower case letters.

Version 2 Normal Puzzle

1   Version 1.

```
Q B h e r r i n g      1   Common small bird
O H t i b b a r E      2   British canine symbol
R J H W L E I E A      3   Unsmoked kipper
A X U c a l f Z H      4   An animal with long ears
H F I J C I Y G S      5   A young cow
w o r r a p s T Q
Q g o d l l u b A
D V Q B A I X H D
F R Z O U W h U J
```

1   Version 2.

```
M Z B C F J F S      1   London's river
E T T F W S V W      2   Can be a bore
R H E O E E T O      3   Famous for Liver birds
S A N E V V D J      4   There is a new castle here
E M Y T T E K Y
Y E T Q J R D N
Z S Q G Z N B M
Z B F R L M M T
```

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DUAL DS/DD (F)	DISK SYSTEMS	789.00
SINGLE SS/DD DRIVE (E)	DISK SYSTEMS	295.00
DRIVE MODULE SS/DD	DISK SYSTEMS	250.00
DRIVE MODULE DS/DD	DISK SYSTEMS	285.00
5 Meg WINCHESTER + CONTR	DISK SYSTEMS	1425.00
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OSBORNE CP/M MANUAL	MANUALS	21.43
GRAPHICS MANUAL	MANUALS	8.75
GRAPHICS MANUAL	MANUALS	8.75
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MANOR MANUAL	MANUALS	1.50

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NASDIS MANUAL	MANUALS	3.25
NASSEMBLER MANUAL	MANUALS	2.00
NASPEN MANUAL	MANUALS	1.00
NASBUS MANUAL	MANUALS	1.00
FDC MANUAL	MANUALS	1.00
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19" CARD FRAME	MISC.	14.00
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NASCOM 3, 48K	NAS 3	549.00
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48K NDOS+FDC	NAS 3	739.00
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64K CPM+NDOS+FDC+AVC	NAS 3	1199.00
NAS 3,256K+CPM+FDC+AVC	NAS 3	1234.00
NASNET WORKSTATION	NETWORKS	0.00
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ZEAP (EPROM) & MANUAL	PROGRAMMING AIDS	37.00
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